Remarks

Claims 1-20 are pending in this application. Claims 16-20 have been allowed. Claims 1-15 have been rejected. The invention is believed to be patentable. Claim 1 has been amended to more particularly point out the invention. More specifically, claim 1 has been amended to recite that the impact values are determinative of where inflection changes are to take place within the sequence of speech items.

Claims 9-15 have been rejected under 35 U.S.C. § 112, first paragraph. Applicants direct the Examiner's attention to the application specification at page 3, lines 4-26, and at pages 21-6. The recited features of claims 9-15 are fully explained in the application.

Claims 1 and 8 have been rejected under 35 U.S.C. §102(e) as being anticipated by *Coorman et al.* (U.S. Patent No. 6,665,641). Regarding claim 1, claim 1 recites a method for converting text to concatenated voice by utilizing a digital voice library and a set of playback rules. The digital voice library includes a plurality of speech items and a corresponding plurality of voice recordings. Each speech item corresponds to at least one available voice recording. Multiple voice recordings that correspond to a single speech item represent various inflections of that single speech item. The method includes receiving text data, converting the text data into a sequence of speech items in accordance with the digital voice library.

The method further comprises determining a syllable count for each speech item in the sequence of speech items, and determining an impact value for each speech item in the sequence of speech items. The impact values are determinative of where inflection changes are to take place within the sequence of speech items.

The method further comprises determining a desired inflection for each speech item in the sequence of speech items based on the syllable count and the impact value for the particular speech item and further based on the set of playback rules. A sequence of voice

recordings is determined by determining a voice recording for each speech item based on the desired inflection for the particular speech item, and based on the available voice recordings that correspond to the particular speech item. Voice data are generated based on the sequence of voice recordings by concatenating adjacent recordings in the sequence of voice recordings.

Coorman fails to describe or suggest the claimed combination including determining an impact value for each speech item in the sequence of speech items where the impact values are determinative of where inflection changes are to take place within the sequence of speech items. As well, *Coorman* fails to describe or suggest consideration of impact value when determining desired inflection for each speech item.

Coorman does describe a text to speech engine composed of a text processor, a target generator, a speech unit database, a waveform selector, and a speech waveform concatenator. In general, the text processor receives text as input and converts the text into an input phonetic data sequence. The input phonetic data sequence is converted by the target generator into a multi-layer internal data sequence to be synthesized. This internal data sequence representation is known as extended phonetic transcription (XPT). The waveform selector determines which candidate speech units can be concatenated.

More specifically, the waveform selector retrieves from the speech unit database descriptors of candidate speech units that can be concatenated into the target utterance specified by the XPT transcription. The waveform selector creates an ordered list of candidate speech units by comparing the XPTs of the candidate speech units with the XPT of the target XPT, assigning a node cost to each candidate. The intention is to fit candidates to the target specification. The waveform selector utilizes various cost functions to evaluate candidate speech units. The Examiner has equated these cost functions to the impact value activities recited by Applicants' claim 1.

Applicants disagree and respectfully request the Examiner to reconsider. Claim 1 specifically recites that the impact values are determinative of where inflection changes are

to take place within the sequence of speech items. The cost functions that are used by the waveform selector for evaluation of candidates with respect to the target specification are far different than the claimed impact values. These cost functions are simply used to determine how well each candidate fits the target specification. There is no suggestion that any of these cost functions make any determination of where inflection changes have to take place within the sequence of speech items.

Further in this regard, the extended phonetic transcription (XPT), which specifies the target utterance, is also not suggestive of the claimed impact values that are determinative of where inflection changes are to take place within the sequence of speech items.

For the reasons given above, claim 1 is believed to be patentable.

Regarding claim 8, claim 8 is dependent from claim 1 and is also believed to be patentable. Claim 8 is believed to recite additional patentable subject matter. Claim 8 recites the method of claim 1 wherein the pitch value for each speech item is determined by normalizing the impact value for the particular speech item. The desired inflection for each speech item is further based on the pitch value for the particular speech item.

The remaining claim rejections for the remaining dependent claims all involve *Coorman* as a primary reference. For reasons given above, *Coorman* fails to describe or suggest the impact value feature as recited by claim 1. Further, the secondary references relied upon by the Examiner fail to overcome the deficiency of the primary reference.

For reasons given above, claims 1-15 are believed to be allowable, and allowance of all pending claims is respectfully requested.

A check in the amount of $430.00 is enclosed to cover the Petition fee. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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